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■ NSF awards \$475K for chemistry lab



▲ Ashley Malich of Youngstown, a graduate student in YSU's chemistry program, works on the NMR spectrometer in Ward Beecher Hall. The NSF has awarded YSU \$475,000 to purchase a new, more advanced spectrometer for the department.

The National Science Foundation has awarded \$475,000 to YSU's chemistry department to purchase a new nuclear magnetic resonance spectrometer, a piece of equipment that will help faculty and students conduct cutting-edge research in biotechnology and nanotechnology.

"The NSF is again recognizing us as a national leader," said Allen Hunter, chemistry professor and principal investigator on the grant. "This is an important tool needed for research, and it helps make us an even stronger department."

NMR spectroscopy is one of the most powerful tools available to chemists to identify unknown substances and to characterize specific arrangements of atoms within molecules.

"Access to state-of-the-art NMR spectrometers is essential to chemists who are carrying out frontier research," the NSF said

in awarding the grant that was written by a team from YSU, led by chemistry Professor Peter Norris, and its partner institutions.

"The new spectrometer will allow our students, both graduate and undergraduate, to solve chemical problems that we haven't been able to on the YSU campus before," Norris said. "This instrument will help make our students even more competitive in the national job market and help ensure our continued success in attracting external funding for our work."

This will be YSU's second NMR spectrometer. The university's current spectrometer is approaching 15 years old, and the new one will include better electronics and allow for more advanced and sophisticated experiments and easier student use, said Daryl Mincey, chemistry department chair. The university will keep and continue to use the magnet from the old spectrometer, he said.

"Competition for the funding was fierce, so the university deserves high praise for this achievement," U.S. Rep. Tim Ryan said about the grant.

Mincey said the equipment will be open for use by chemists from universities across the Midwest, including Muskingum College in Ohio, Harold Washington College in Chicago and Delta College in Michigan.

The award comes on the heels of a \$1 million federal earmark that Ryan landed for YSU late last year for the CyberEnabled Industrial Innovation Center, led by Hunter.

"Making YSU into a center for research in biotechnology and nanotechnology will play a major part in helping create high-quality and good-paying jobs for our region," Ryan said.

"Research in these areas hold enormous promise of revolutionizing the healthcare and manufacturing industries throughout our nation, and the Mahoning Valley is well-positioned to lead the development of this cutting-edge technology."